

What is claimed is:

- 1 1. A method of operating an access network infrastructure in
2 connection with a plurality of service networks comprising the steps of:
3 creating a service policy message specifying a service class for
4 communications with a network access device after notification that a network
5 address, associated with a service network, has been allocated to the network
6 access device;
7 transmitting the service policy message to a service policy
8 enforcement point in the access network infrastructure.
- 1 2. The invention of claim 1 wherein the service policy
2 enforcement point schedules access to the access network infrastructure based on
3 the service class specified in the service policy message.
- 1 3. The invention of claim 2 wherein the service policy
2 enforcement point schedules access using class based queuing.
- 1 4. The invention of claim 2 wherein the service policy
2 enforcement point polices access to the access network infrastructure based on the
3 service class specified in the service policy message.
- 1 5. The invention of claim 1 wherein the access network
2 infrastructure comprises a hybrid fiber coaxial network.
- 1 6. The invention of claim 5 wherein the service policy
2 enforcement point is a cable modem termination system.
- 1 7. The invention of claim 1 wherein the service networks utilize
2 the Internet Protocol and wherein the addresses are Internet Protocol addresses.
- 1 8. The invention of claim 7 wherein the plurality of service
2 networks are operated by different Internet Service Providers.

1 9. The invention of claim 7 wherein the plurality of service
2 networks offer access to different Internet Protocol-based services.

1 10. The invention of claim 1 wherein the network address is
2 allocated using a host configuration protocol.

1 11. The invention of claim 10 wherein the host configuration
2 protocol is DHCP.

[illegible]